

Date: Thu, 24 Mar 94 04:30:42 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V94 #69
To: Ham-Space

Ham-Space Digest Thu, 24 Mar 94 Volume 94 : Issue 69

Today's Topics:

 Navstar GPS Constellation Status (94-03-23)
 Telecom and Meteors

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Problems you can't solve otherwise to brian@ucsd.edu.

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(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 23 Mar 1994 06:06:26 -0800
From: dont-send-mail-to-path-lines@ames.arpa
Subject: Navstar GPS Constellation Status (94-03-23)
To: ham-space@ucsd.edu

Navstar GPS Constellation Status
(94-03-23)

Blk				NASA	Orbit	Launch		
II		PRN	Internat.	Catalog	Plane	Date		
Seq	SVN	Code	ID	Number	Pos'n	(UT)	Clock	Available/Decommissioned

Block I								
	01	04	1978-020A	10684		78-02-22	78-03-29	85-07-17
	02	07	1978-047A	10893		78-05-13	78-07-14	81-07-16
	03	06	1978-093A	11054		78-10-06	78-11-13	92-05-18
	04	08	1978-112A	11141		78-12-10	79-01-08	89-10-14
	05	05	1980-011A	11690		80-02-09	80-02-27	83-11-28
	06	09	1980-032A	11783		80-04-26	80-05-16	91-03-06
	07					81-12-18	Launch failure	
	08	11	1983-072A	14189		83-07-14	83-08-10	93-05-04

09	13	1984-059A	15039	C-1	84-06-13	Rb	84-07-19
10	12	1984-097A	15271	A-1	84-09-08	Rb	84-10-03
11	03	1985-093A	16129	C-4	85-10-09	Rb	85-10-30

Block II

II-1	14	14	1989-013A	19802	E-1	89-02-14	Cs	89-04-15 05:02 UT
II-2	13	02	1989-044A	20061	B-3	89-06-10	Cs	89-08-10 20:46 UT
II-3	16	16	1989-064A	20185	E-3	89-08-18	Cs	89-10-14 20:21 UT
II-4	19	19	1989-085A	20302	A-4	89-10-21	Cs	89-11-23 03:13 UT
II-5	17	17	1989-097A	20361	D-3	89-12-11	Cs	90-01-06 03:30 UT
II-6	18	18	1990-008A	20452	F-3	90-01-24	Cs	90-02-14 22:26 UT
II-7	20	20	1990-025A	20533	B-2	90-03-26	Cs	90-04-18 23:13 UT
II-8	21	21	1990-068A	20724	E-2	90-08-02	Cs	90-08-22 15:00 UT
II-9	15	15	1990-088A	20830	D-2	90-10-01	Cs	90-10-15 00:39 UT

Block IIA

II-10	23	23	1990-103A	20959	E-4	90-11-26	Cs	90-12-10 23:45 UT
II-11	24	24	1991-047A	21552	D-1	91-07-04	Rb	91-08-30 04:44 UT
II-12	25	25	1992-009A	21890	A-2	92-02-23	Cs	92-03-24 11:00 UT
II-13	28	28	1992-019A	21930	C-2	92-04-10	Cs	92-04-25 20:32 UT
II-14	26	26	1992-039A	22014	F-2	92-07-07	Cs	92-07-23 19:43 UT
II-15	27	27	1992-058A	22108	A-3	92-09-09	Cs	92-09-30 20:08 UT
II-16	32	01	1992-079A	22231	F-1	92-11-22	Cs	92-12-11 14:49 UT
II-17	29	29	1992-089A	22275	F-4	92-12-18	Cs	93-01-05 16:39 UT
II-18	22	22	1993-007A	22446	B-1	93-02-03	Cs	93-04-04 05:20 UT
II-19	31	31	1993-017A	22581	C-3	93-03-30	Cs	93-04-13 20:53 UT
II-20	37	07	1993-032A	22657	C-4	93-05-13	Cs	93-06-12 16:15 UT
II-21	39	09	1993-042A	22700	A-1	93-06-26	Cs	93-07-20 12:54 UT
II-22	35	05	1993-054A	22779	B-4	93-08-30	Cs	93-09-28 19:29 UT
II-23	34	04	1993-068A	22877	D-4	93-10-26	Cs	93-11-22 18:20 UT
II-24	36	06	1994-016A	23027	C-1	94-03-10	Projected usable 94-04-18	

38 To be launched on need in FY '94

33 To be launched on need in FY '94

40 To be launched on need in FY '95

30 To be launched on need in FY '95

Notes

1. NASA Catalog Number is also known as NORAD or U.S. Space Command object number.
2. No orbital plane position = satellite no longer operational.
3. Clock: Rb = Rubidium; Cs = Cesium
4. S/A had been enabled on Block II satellites during part of 1990; S/A off between about 10 August 1990 and 1 July 1991 due to Gulf crisis; standard level re-implemented on 15 November 1991. Currently, PRN15 and PRN20 appear to have little or no S/A imposed.
5. Anti-spoofing was activated on 94-01-31 at 0000 UT on all Block II

- satellites. (ref. NANU 050-94042)
6. PRN number of SVN32 was changed from 32 to 01 on 93-01-28.
 7. PRN03 is operating on Rb clock without temperature control.
 8. PRN03 was set unhealthy on 94-02-27 at 0320 UT. It was unusable beginning at 0233 UT on 94-02-27 and will remain unusable until further notice due to "end of life testing." (ref. NANU 057-94059 and NANU 083-94059). It is unlikely that PRN03 will return to service. (ref. USNO)
 9. The decommissioning date for PRN06/SVN03 is the date of termination of operations of this satellite (ref. USNO) and is about 3 weeks later than the date GPSIC gives for "deactivation".
 10. The PRN06/SVN36 launch included the SEDS-2 tether experiment on the Delta II rocket body (object 23028, 1994-016B).
 11. PRN09 was unusable beginning 93-10-15 1200 UT until 93-12-07 1940 UT due to testing. (ref. NANU 327-93288 and NANU 402-93341)
 12. The power supply of PRN13 may have insufficient capacity to maintain L1/L2 transmissions during eclipse season. During this period, the L1/L2 transmissions of PRN13 may be turned off for up to 12 hours a day. (ref. NANU 285-92315)
 13. The degraded C/A-code performance of PRN19 was corrected effective 94-01-04 at 0000 UT. (ref. NANU 343-93294, NANU 396-93337, and NANU 006-94010)
 14. PRN24 was unusable from 94-01-23 1745 UT until 94-02-01 1516 UT due to a change in operational frequency standard from Cs to Rb. (ref. NANU 023-94023, NANU 029-94024, NANU 034-94032, and USNO)

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Date: Wed, 23 Mar 1994 15:18:20 GMT
From: ihnp4.ucsd.edu!usc!sol.ctr.columbia.edu!jabba.ess.harris.com!
news.ess.harris.com!p15jg.ess.harris.com@network.ucsd.edu
Subject: Telecom and Meteors
To: ham-space@ucsd.edu

In Article <1994Mar23.001205.21873@rs6000.cmp.ilstu.edu>
"cdfore@rs6000.cmp.ilstu.edu (Curt Fore)" says:

>
> Help!! I'm Looking for info on using meteors to bounce signals for
> telecommunication. I saw a show in January on it. Now I have to write a
> paper on something in telecommunication and as you can see my writing sucks.
Amateur radio operators use this (sometimes). April "QST" magazine has a
table of current record-holders using various "modes" of propagation for

microwave communications and I think meteor-scatter is one of the ones shown. In any event, meteor-scatter should be covered in the "ARRL HANDBOOK", available in many bookstores (particularly University Bookstores at schools with significant technical orientation).

Other amateur radio magazines that you might look at are probably in your school library, and certainly in any large bookstores around there.

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(I WROTE IT, NOT MR. HARRIS)

"ANY CONCEPT NOT RELATED TO 'FONTS' WHICH CANNOT BE EXPRESSED IN 3 FONTS
... CANNOT BE EXPRESSED IN 3000 FONTS."

End of Ham-Space Digest V94 #69
